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***UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
Enterprise Energy Efficiency (3E)***

***IQC Contract # EPP-I-00-03-00004-00
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***USAID 3E Presentation at the FBiH Environment Fund
Authors: Project Team
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USAID 3E aims:

- Implementation of 17 energy efficient pilot projects throughout BiH
- Increase public and private sector capacity to implement EE projects
- Raise public awareness of EE potential



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USAID 3E – Approved Pilot Projects

- 1. Sarajevo, Mechanical Engineering Faculty**
- 2. Tuzla, Primary School „Pazar“**
- 3. Mostar, Gimnasium**
- 4. Sarajevo and Tuzla regions, 20 private houses**
- 5. Foča, apartments for returnees (3 buildings)**
- 6. Rogatica, apartments for returnees**
- 7. Gradiška, Kindergarten „Lepa Radić“**
- 8. Bihać, Cultural Centre Complex**
- 9. Livno, Sports hall**



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USAID 3E – Approved Pilot Projects

- 10. Prijedor, Primary School „Branko Ćopić“**
- 11. Gračanica , SOS Kinderdorf**
- 12. Olovo, Primary School „Olovo“ and
Secondary School „Musa Ćazim Ćatić“**
- 13. Travnik, municipality building**
- 14. Bijeljina, LED street lighting**
- 15. Srebrenica, LED street lighting**
- 16. Trebinje, LED street lighting**
- 17. Banja Luka, Student Centre „Nikola Tesla“**



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Pilot project – Mechanical Engineering Faculty Sarajevo (MEF)

- Partners on project:
 - **UNDP BiH, MEF**
- Implemented EE measures:
 - **New gas condensing boiler**
 - **Window replacement**
 - **Thermal insulation of the facade**
 - **Monitoring and verification system**

Value of the PP:	561,500 KM
UNDP	375,000 KM
MEF	56,500 KM
USAID 3E	130,000 KM

Energy saved: **50% ili 412 MWh/per year**
Money saved: **56,000 KM/per year**
Payback period: **10 years**



MEF building *before* and *after* implementation of the EE measures



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System for monitoring and verification at MEF



1 mjerilo utroška
prirodnog gasa



3 vodomjera



9 senzora temp.
(1 vanjski)



6 mjerila utroška
elektr. energije



3 mjerila utroška
toplotne energije



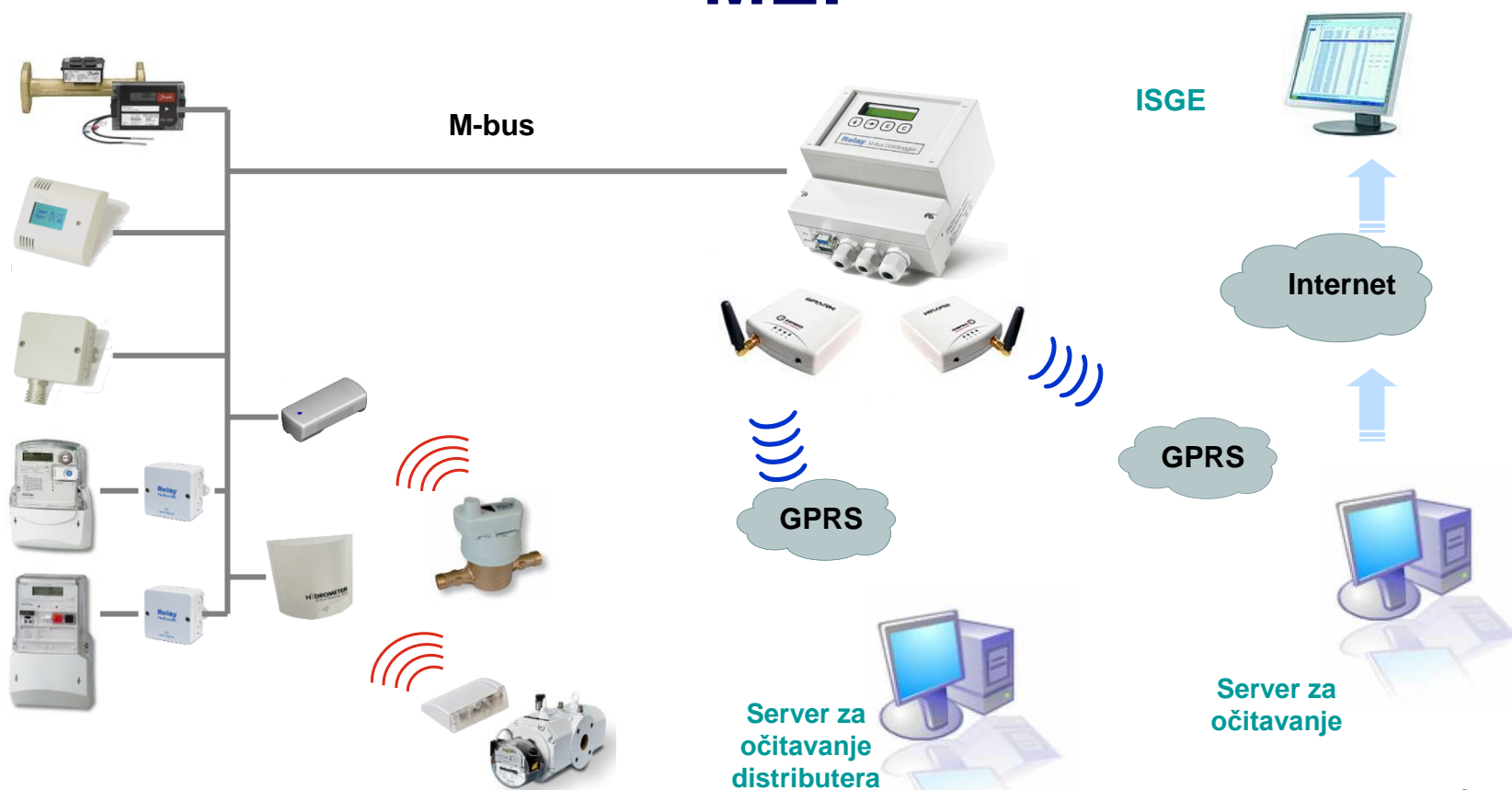
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System for monitoring and verification at MEF





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Pilot project – Primary School “Pazar” in Tuzla

- **Partners on project:**
 - **UNDP BiH, Municipality Tuzla**
- **Implemented EE measures:**
 - **Window replacement**
 - **Repair and extension of the heating system**
 - **New heating substation**
 - **Monitoring and verification system**

Value of pilot project:	170,000 KM
Municipality of Tuzla	65,000 KM
3E	105,000 KM

Energy saved:	30% or 99 MWh/per year
Money saved:	7,200 KM/per year
Payback period:	23,6 years



Old / new heating substation

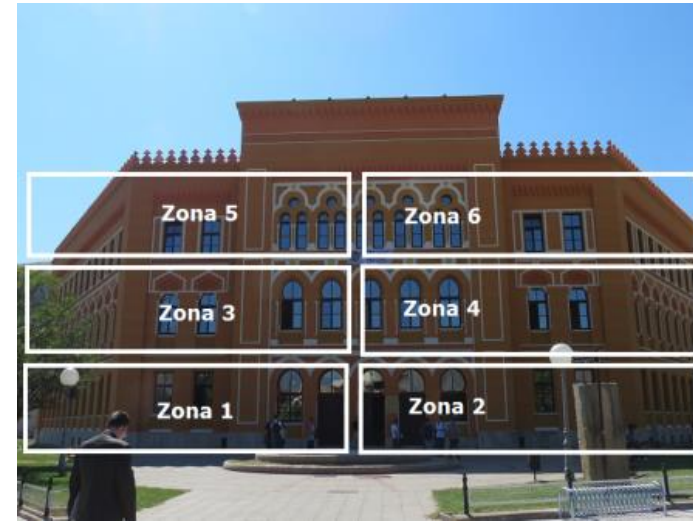


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Pilot project – Old High School in Mostar

- Partners on project:
 - UNDP BiH, City of Mostar
- Implemented EE measures:
 - Heating system divided in zones
 - Automatic control of heating water temperature
 - New windows
 - Monitoring and verification system



Heating zones

Value of pilot project:	56,000 KM
UNDP	26,500 KM
USAID 3E	29,500 KM
City of Mostar*	350,000 KM

Energy saved:	20% ili 50 MWh/per year
Money saved:	9,700 KM/per year 10
Payback period:	5,7 years



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Pilot projekat – 20 private houses in Sarajevo and Tuzla regions

- Partners on project:
 - Homeowners and Suisse Caritas
- Implemented EE measures:
 - Thermal insulation of facade (10cm EPS)

Value of pilot project:	180,000 KM
Homeowners	145,000 KM
Suisse Caritas	non currency
USAID 3E	35,000 KM
Energy saved:	45% ili 550 MWh/per year
Money saved:	22,000 KM/per year
Payback period:	8,1 years



*Before and after implementation
of EE measures*



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Pilot project – SOS Kinderdorf in Gračanica

- **Partners on project:**
 - **SOS Kinderdorf**
- **Implemented EE measures (two out of twelve houses):**
 - **Window repair**
 - **Installation of solar thermal collectors for PTV preparation**



Value of project:	28,000 KM
SOS Kinderdorf	8,000 KM
USAID 3E	20,000 KM

Energy saved:	25% or 25 MWh/per year
Money saved:	3,600 KM/per year
Payback period:	7,7 years



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Pilot project – Sports Hall in Livno

- **Partners on project:**
 - **Municipality Livno, UNDP, GIZ**
- **Implemented EE measures:**
 - **Replacement of windows and part of the roof / facade cover**
 - **Connection to the remote district heating**
 - **Reconstruction of the heating and ventilation system**
 - **Monitoring and Verification system**

Value of pilot project:	330,000 KM
Municipality Livno	145,000 KM
GIZ	6,000 KM
UNDP	7,000 KM
USAID 3E	172,000 KM

Energy saved:	40% or 80 MWh/per year
Money saved:	21,000 KM/per year
Payback period:	11 years



Sports hall in Livno



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Pilot project – Trebinje LED street lighting

- **Partners on project:**
 - **UNDP and City of Trebinje**
- **Implemented EE measures:**
 - **Replacement of the existing mercury vapour bulbs with LED bulbs**

Value of pilot project:	111,000 KM
City of Trebinje	31,000 KM
UNDP	40,000 KM
USAID 3E	40,000 KM
Energy saved:	70% or 158 MWh/per year
Money saved:	28,000 KM/per year
Payback period:	4 years





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Capacity strengthening – Energy Management and Green Office courses

- **5** locations in BiH (Banja Luka, Bihać, Mostar, Sarajevo and Tuzla)
- More than **270** participants in total



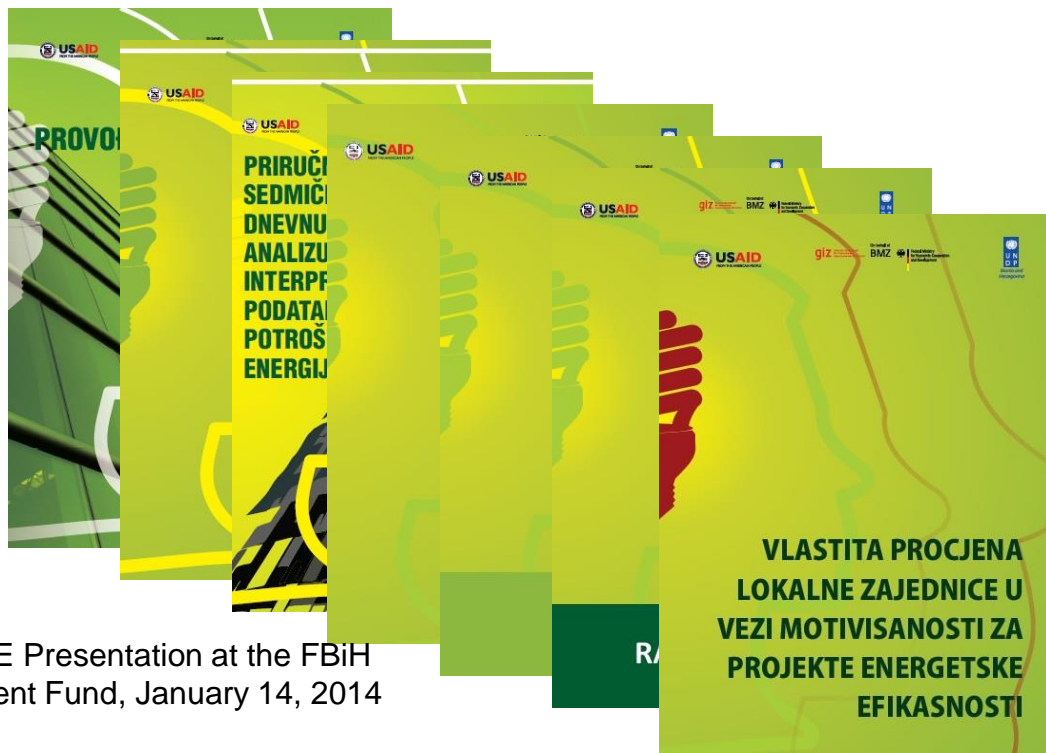


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Capacity strengthening – EE Library

- **7** brochures about different EE topics
- Jointly published by USAID 3E, UNDP and GIZ
- Published for interested citizens and EE experts



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Enterprise Energy Efficiency (3E)

Raising public awareness and capacity strengthening: EE Knowledge Days in Sarajevo

- **10** different locations
- **48** presentations
- More than **200** students attended
- More than **800** visitors in total
- **23** media houses followed the events
- “20 EE tips brochure inserted in
120,000 copies of three daily newspapers
(Oslobođenje, Avaz and Glas Srpske)





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Enterprise Energy Efficiency (3E)

Raising public awareness and capacity strengthening : EE Knowledge Days in Sarajevo

Participation from following faculties:

- MEF, **40 students**
- Faculty of Economics, **30 students**
- Faculty of Civil Engineering and Architecture, **15 students**
- Electrical Engineering Faculty, **65 students**
- Faculty of Philosophy, **60 students**





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Raising public awareness – Energy Efficiency Festival

- **6** days Festival
- **14** events throughout the city (cultural and entertainment, concerts, street and sports events, art exhibitions and movies) with the aim of promoting energy efficiency
- More than **20,000** people visited different events



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Raising public awareness – EE Festival

UKLJUČI SE!

FESTIVAL ENERGETSKE EFIKASNOSTI
5. – 10. JUNI, 2012. GODINE.
www.eee.ba



ABCDEFG

ORGANIZER/ORGANIZATOR: _____



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Energy Efficiency Year in Canton Tuzla (EE year in Canton Tuzla)





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JUNE 2013 – Start of EE year in Canton Tuzla

- Thirteen mayors of Canton Tuzla municipalities signed the Energy Charter by which they commit to promotion of sustainable energy future in their municipality and Canton.





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JULY 2013 – Student Energy Club Tuzla

- Connecting the students from Tuzla University, especially from Electrical Engineering Faculty, Mechanical Engineering Faculty, Civil Engineering and Architecture Faculty and Faculty of Economics.





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AUGUST 2013 – „EE on our lakes“

- The benefits of energy efficiency and renewable energy sources were practically presented to the visitors of Panonic lakes in Tuzla.





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SEPTEMBER 2013 – EE Info points in municipalities

- Info materials regarding energy efficiency that can assist citizens to educate themselves about EE and its benefits.





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TUZLA CANTON

- ***1x Info Center***
- ***13x Info points***





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OCTOBER 2013 – „Think of tomorrow“ school hour

- Activities for children; they are developing the energy use awareness





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NOVEMBER 2013 – Technical workshop in Gradačac

- First workshop „Introduction of systematic energy management“ in Tuzla Canton municipalities.



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NOVEMBER 2013 – Coordination workshop about media activities

- Organized for municipality representatives in charge of public relations.





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DECEMBER 2013 – Technical workshop in Gračanica

- Adoption of energy policy in the municipality.
- Work on EMIS software.





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DECEMBER 2013 – Start of Media Campaign

- Will cover TV, radio, billboard, paper media and web promotion with focus on Canton Tuzla.
- Media campaign active until May 2014.





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Energy Efficiency Year in Canton Tuzla

January 2014	- Educational series about energy efficiency, in partnership with RTV TK
February 2014	- Launch of EE Info Center in Tuzla and free phone line
March – May 2014	- Regular activities in EE Info Center - EE series on RTV TK - Media Campaign - Technical Workshop - Final workshop for EE Year in Tuzla Canton



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THANK YOU!

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Deputy Chief of Party

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